1. Answer the following using the diagram below.   
    The numbers show the number of elements in each part.



1. How many numbers are in set A? \_\_\_\_\_\_
2. How many numbers are in set B? \_\_\_\_\_\_
3. How many numbers are in set A or set B? \_\_\_\_\_\_\_
4. How many numbers are in set A and set B?\_\_\_\_\_\_\_\_
5. How many numbers are in set A but not C? \_\_\_\_\_\_\_\_
6. How many numbers are not set A? \_\_\_\_\_\_\_\_\_
7. How many numbers are in set A and set B and set C? \_\_\_\_\_\_\_\_\_
8. How many numbers are in set A or set B or set C? \_\_\_\_\_\_\_\_\_\_
9. In a survey of 500 people 200 said that they would be buying a product in the next month. 150 said that they would buy an i-pad and 25 said that they would buy and

i-pad and an i-phone. How many will purchase neither? How many will purchase only an  
i-pad? Use a Venn Diagram to help you do this problem.

How many purchase neither? \_\_\_\_\_\_\_\_\_\_\_\_ , How many purchase only an i – pad? \_\_\_\_\_\_\_\_\_\_\_\_

1. Price is Right Problems.
2. P(contestant lands on a 5 or a 75) \_\_\_\_\_\_\_\_\_\_\_\_
3. If a contestant has 30 cents, what is the probability that he will get 70 cents on the next spin?

\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the probability that the contestant lands on $ 1.00 twice?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **A**. If one die is thrown find the following:

**i**.  \_\_\_\_\_\_\_\_\_\_\_\_  **ii**.  \_\_\_\_\_\_\_\_\_\_\_\_\_

**iii**.  \_\_\_\_\_\_\_\_\_\_\_\_\_

**B**. If 2 dice are thrown what is the probability for the sum for the following as listed below:

**i**. \_\_\_\_\_\_\_\_\_\_\_\_  **ii**.  \_\_\_\_\_\_\_\_\_\_\_

**iii**.  **\_\_\_\_\_\_\_\_\_\_\_ iv**. \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**v**.  \_\_\_\_\_\_\_\_\_\_ **vi**. \_\_\_\_\_\_\_\_\_\_\_\_\_

**C**. If 2 sets of dice are thrown what is the probability for the following?

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ii.** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Probability Homework Set for Seminar Geometry Class Part 2**

**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **If 1 die is thrown, find the odds of the following:**

**i**. Favorable odd of  = \_\_\_\_\_\_\_\_\_ **ii**. Favorable odds of = \_\_\_\_\_\_\_\_\_\_

**iii**. Unfavorable odds of  = \_\_\_\_\_\_\_\_\_\_\_\_\_

1. **If 2 dice are thrown, find the odds of the following:**

**i**. Favorable odds of  = \_\_\_\_\_\_\_\_\_\_   
  
  
 **ii**. Unfavorable odds of  = \_\_\_\_\_\_\_\_\_\_\_

1. If n! = n(n-1)(n-2)(n-3)--------------,  and ,
2. Find the following:  
     
    = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Simplify:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_ and  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Solve for n in the following:
3. 

n = \_\_\_\_\_\_\_\_\_\_\_\_\_

1. 

n = \_\_\_\_\_\_\_\_\_\_\_\_

1. If 6 cards are drawn from a deck of cards find the following probabilities:

i. You are dealt exactly 3 Aces.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii. You are dealt exactly 2 Aces.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Iii. You are dealt at least 2 Aces.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For Halloween Hedly, Ashwin, Maddie, Beau and Mustafa have 30costumes to pick from.

How many ways can the costumes be chosen?

\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How many different 15 letter word can be formed from the following 2 works.  
    “ geometry seminar”?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A security lock pass-number is to contain 4 numbers using the digits 0 through 9. If 0 cannot be the first digit, the last digit is 9 and no digit can be repeated, how many pass-numbers can be created for the locks?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is the probability of throwing exactly 8 tails if a fair coin is thrown 10 times?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. If three fair coins are tossed, what is the probability that at most 2 of the coins are heads?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. If Randolph has 10 cheerleaders and 6 are chosen for competition, how many ways can the teams be chosen from the group of 10 if the head cheerleader has to be in the group?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A performing dog team is to be randomly selected from a group of 9 Yorkshire Terriers and 20 Cocker Spaniels. How many different teams can be formed if the team must have 2 Yorkies and 3 Cocker Spaniels?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. You reach into a sack of M&M’s that has only 3 burnt orange and 2 crimson pieces left.

If you pick 2, what is the probability that both will be the same color?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_